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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,393

04/20/2006

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09/30/2008

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

POPHAM, JEFFREY D

ART UNIT

PAPER NUMBER

2137

MAIL DATE

DELIVERY MODE

09/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,393	Applicant(s) KAHLMAN ET AL.	
	Examiner JEFFREY D. POPHAM	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060420, 20071009</u> . | 6) <input type="checkbox"/> Other: _____ |

Remarks

Claims 1-11 are pending.

Claim Objections

1. Claims 1, 3, 5, and 8-11 are objected to because of the following informalities:
 - Each of claims 1, 9, and 10 recite "prohibiting the provision and/or the output". While output has antecedent basis, "the provision" has yet to be seen in the claim. For purposes of prior art rejection, "the provision" has been construed as "a provision".
 - Claim 3 recites that the response signal providing means comprise "a response signal generation means (13), in particular an encryption unit". It is unclear here whether the response signal generation means must be an encryption unit, must include at least an encryption unit, or if this encryption unit is merely exemplary of what the response signal generation means may be. For purposes of prior art rejection, this portion of claim 3 has been construed as "a response signal generation means which comprises an encryption unit". Claims 5, 8, and 9 have the same issue with this "in particular" language and have been construed in a likewise fashion.
 - Claim 10 recites "said integrated circuit" before any integrated circuit has been introduced in the claim. For purposes of prior art rejection, "said integrated circuit" has been construed as "an integrated circuit".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 11 is directed to a computer program comprising computer code means. A program does not fall within a statutory category of invention. Additionally, this program is not stored on any computer readable storage medium, nor is any computer readable storage medium disclosed in the specification as storing such program or code.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Silverbrook (U.S. Patent 6,757,832).

Regarding Claim 1,

Silverbrook discloses a information carrier comprising an integrated circuit representing a physical unclonable function, comprising:

An input means for receiving a challenge signal for challenging the integrated circuit (Figures 1-2; and Column 27, line 45 to Column 28, line 23; and Column 34, line 64 to Column 35, line 45);

A response signal providing means for providing a response data signal in response to the challenge data signal (Figures 1-2; and Column 27, line 45 to Column 28, line 23; and Column 34, line 64 to Column 35, line 45);

An output means for outputting the response data signal (Figures 1-2; and Column 27, line 45 to Column 28, line 23; and Column 34, line 64 to Column 35, line 45); and

A delay means for delaying and/or prohibiting a provision and/or the output of the response data signal (Column 61, line 65 to Column 62, line 60; Column 76, line 64 to Column 77, line 22; and Column 80, line 44 to Column 81, line 18).

Regarding Claim 9,

Claim 9 is an integrated circuit claim that corresponds to information carrier claim 1 and is rejected for the same reasons.

Regarding Claim 10,

Claim 10 is a method claim that corresponds to information carrier claim 1 and is rejected for the same reasons.

Regarding Claim 11,

Claim 11 is a computer program claim that corresponds to information carrier claim 1 and is rejected for the same reasons.

Regarding Claim 2,

Silverbrook discloses that the response signal providing means comprises a memory for storing pairs of challenge data and associated response data (Column 27, line 45 to Column 28, line 23; Column 34, line 64 to Column 35, line 45; and Column 80, lines 29-43).

Regarding Claim 3,

Silverbrook discloses that the response signal providing means comprises a response signal generating means which comprises an encryption unit, for generating a response data signal in response to a challenge data signal (Column 34, line 64 to Column 35, line 45; and Column 80, lines 29-43).

Regarding Claim 4,

Silverbrook discloses that the delay means comprises a noise source for adding a noise signal to the response signal provided by the response signal providing means (Column 80, line 44 to Column 81, line 18; and Column 88, lines 10-22).

Regarding Claim 5,

Silverbrook discloses that the delay means comprises a noisy read-out means comprising a noisy read-out amplifier for amplifying the

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response signal provided by the response signal providing means
(Column 80, line 44 to Column 81, line 18; and Column 88, lines 10-22).

Regarding Claim 6,

Silverbrook discloses that the delay means comprises limiting means for restricting the number of response data signals provided and/or output per time unit (Column 61, line 65 to Column 62, line 60; and Column 76, line 64 to Column 77, line 22).

Regarding Claim 8,

Silverbrook discloses that the delay means comprises a counter means for limiting the total number of responses or the number of times a response to a given challenge can be provided (Column 61, line 65 to Column 62, line 60; and Column 76, line 64 to Column 77, line 22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook in view of Miyaira (U.S. Patent 7,120,808).

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Silverbrook discloses use of power control to stop power supply attacks (Column 85, lines 3-14; and Column 88, lines 46-48); but does not explicitly disclose limiting the amount of power available per time unit.

Miyaira, however, discloses limiting the amount of power available per time unit (Column 7, lines 55-67; Column 10, lines 14-31). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the power control techniques of Miyaira into the authentication system of Silverbrook in order to allow the system to monitor and control power usage such that the system can throttle power usage when such usage reaches a threshold, thereby keeping power consumption within a predetermined range such that it is more difficult for an attacker to perform power supply attacks and attacks based on power consumption.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY D. POPHAM whose telephone number is (571)272-7215. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey D Popham
Examiner
Art Unit 2137

/Jeffrey D Popham/
Examiner, Art Unit 2137

/Emmanuel L. Moise/
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